

# THERMOFUSIBLE POLYLACTIC ACID FIBER

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## Abstract of JP 7310236 (A)

**PURPOSE:**To obtain the subject conjugate fiber by using two kinds of polyactic acid polymers differing in melting point from each other, and suitable as a material for completely biodegradable nonwoven fabrics having sufficient tensile strength, tear resistance and peel strength. **CONSTITUTION:**The objective thermofusible conjugate fiber is made up of a polylactic acid polymer A having a melting point  $T_a$  and containing  $\geq 80\text{mol}\%$  of L- or D-lactic acid unit and a polylactic acid polymer B having a melting point lower than that of the polymer A by  $\geq 10 \text{ deg.C}$  or noncrystalline with no melting point.; In this case, the polymer A and/or polymer B used is copolymerized with 0.1-15wt.% of at least one compound having polyfunctional group selected from polyethylene glycols  $\geq 300$  in molecular weight, aliphatic or alicyclic polyhydric alcohols, polycarboxylic acids, and aliphatic, alicyclic or aromatic hydroxycarboxylic acids. The thermofusible conjugate fiber has a multilayer structure such as of sheath-core, side-by-side, multicore, multiparallel, concentric, eccentric, or parabola-type. A biodegradable nonwoven fabric is obtained by hot-embossing treatment of a web of the conjugate fibers.

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